

ART. IV. *Remarks on Stammering.* By EDWARD WARREN, M. D.,
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A physician who has had an opportunity of observing a chronic disease in his own person, may naturally be supposed better qualified to write upon that disease, than one whose attention has only been called to the matter he treats upon, in the common routine of practice. Lancisi, Corvisart, Bayle, Laennec, Floyer and Bree, were victims of the diseases upon which they have given us so much information. This consideration has led me to suppose I might perform a useful service in committing to paper some remarks, the result of my experience, upon the subject of Psellismus.

The obscurity which rests upon it, and the vague and conjectural manner in which most medical writers are content to treat it, is matter of much surprise. The hesitation and doubt, on the one hand, with which professional writers allude to it; and, on the other hand, the confidence with which the inventors of systems for its cure set forth their claims, are equally remarkable. It seems evident that the subject has obtained very little attention from physicians.

A desire is constantly expressed by reviewers and journalists, as well as by the profession at large, that persons who undertake to write upon impediments of speech, upon the organs of articulation, or upon the art of speaking, would throw more light upon the mechanism of the human voice. It is supposed that if this mechanism were well understood, the manner of correcting its defects would be rendered easy.

If our watch is out of order, if it will not keep time, if the hand will not move in accordance with the action of the spring, we must make ourselves acquainted with its intimate structure before we can rectify the defect.

This reasoning, but for one objection, would apply exactly to the human body—to the human voice. We must understand the machinery; we must know whether the defect is in the nerves, the arteries, the muscles, the skin, or the alimentary canal, before we can prescribe. There is only one thing wanting to make the analogy complete. This is, that however clearly we may make ourselves acquainted with the machinery, i. e. the anatomy and physiology of the human body, there is one thing we cannot understand. The spring is invisible—the manner in which it acts is unknown.

Whatever knowledge discoveries in anatomy and surgery may give us of the organs of speech, no light will be thrown upon the means of

remedying the impediment. Why? Simply because the organs may be perfect, and yet the speech defective. In the majority of stammerers there is no organic defect.

As well might we expect to cure an epileptic patient by explaining to him the nature of muscular power, informing him that the muscles are stimulated to contract through the medium of certain nerves; that these nerves may be traced to the spinal cord, and this to the brain. Here we have the whole machinery well known. Skin, muscle, bone, nerves, and blood-vessels, are all known; and, as far as we can see, are perfect. In ordinary cases, we will to move our hand, and our hand moves; and it does not move but by our will. The case with our patient is simply reversed; he wills to move his hand, and it does not move, or its motions are beyond his control.

It is the same with the stammerer. He wills to utter an articulate sound, but the sound does not come; *vox faucibus hæsit*. In other cases an inarticulate sound is produced, the actions of the facial muscles and the jaw are irregular and spasmodic, producing distortion of the features, while the emission of sound not being in accordance with, and consequently not modulated by, the action of the muscles of articulation, may even become a howl.

If I am asked how it can be proved that there is no defect in the organs of speech of the stammerer, I answer, because if you place him in certain circumstances, his speech will become perfectly free. Organic defects are known by the constancy of their symptoms. It is a well known fact that most, if not all, stammerers, can sing with ease. Most of them can read poetry fluently. Some are entirely free from their impediment when by themselves. They can speak or read aloud for hours when they know no one hears them, without the slightest hesitation or catch in their voice. Perhaps they can read or speak with more fluency than those who have no impediment; for those who are led by this defect to pay great attention to the means of acquiring a free and faultless mode of speech, will, when free from it, be better speakers than those whose attention has never been called to the subject of elocution. It is a fact, though but little noticed, except by teachers of elocution and those who have been led to observe particularly the conversation of others, that perfectly easy and fluent speech is rare; at least among the male part of society. A stammerer who is perfectly cured will be a better speaker than is generally met with, for all the means for overcoming stammering are adapted to produce fluent and faultless speech.

If stammerers, then, can, under certain circumstances, speak thus fluently, does it not prove that there is no defect in the organs. Were

stammering produced by a defect in the organs of articulation and voice, the subject would continue to stammer under all circumstances. The mere removal from an occupied to an unoccupied apartment would make no difference; it could not restore parts that were deficient, nor remove parts that were redundant.

That there are defects of speech produced by organic disease, I am well aware; but in general these may be ascertained by inspection of the organs. Thus, the removal of the tongue, the loss of teeth, hare-lip, and, above all, fissure of the palate, may produce imperfect or inarticulate utterance of the worst kind. These causes, however, do not produce stammering.

If there is, therefore, no organic defect,—if the patient can speak freely when alone, and if the mere presence of another person causes him to stammer,—does it not prove that his impediment is owing solely to mental causes; that his is a mental affection?

Stammering, however, is a complicated affection. It originates in weakness of the nervous system—in irregular action of the nerves. Afterwards, the fear of stammering causes a person to stammer; the organs of speech soon acquire a depraved habit; the nerves also are habituated to irregular action, as in chorea, and the habit may become difficult to eradicate, even if the mental cause is removed. We have, therefore, mental and physical causes united, in every degree of complication.

The mental emotion increases the effect produced by the vicious habit of the organs, and this habit increases the mental emotion. Thus, these two causes are constantly acting on each other and aggravating the disease. Some persons never allow the fear of stammering to prevent the expression of their thoughts; but others acquire habits of silence, and of thinking so much before they speak, that they lose the power of translating their thoughts readily into tangible words, if I may use the expression, and hence the want of command of language is added to their other difficulties. An habitual stammerer of this kind, if suddenly relieved from his impediment, will find almost as much difficulty from this want of command of words as he did before from his defect of utterance. There is also another difficulty, which is, that his attention being always divided between the words he has to utter, and the consideration how he is to utter them, his ideas become confused, and very probably he forgets the latter part of his sentence before he has uttered the first. If mental embarrassment of any kind, if want of a perfect coolness and knowledge of what he is to say, will make a good public speaker stammer, it may be understood in how much greater degree it will operate to increase a habit of stammering.

I may allude to another thing also, which gives a singular appearance to the conversation of the stammerer, even when he appears to speak with ease. This is, that without being perfectly aware of it himself, he is constantly considering before he speaks, whether the words he means to employ are easy to articulate; and he is constantly in search of easy words. Hence, he makes use of odd and *outrè* expressions; and as no two words are perfectly synonymous, the words he substitutes for those which would more perfectly express his meaning, and which are chosen in haste, and for no other reason than easy utterance, often sound odd, or convey a meaning very different from what he wishes. Although he may see that this is the case, yet exhausted by the effort he has already made, he does not attempt to correct the impression he has communicated. In this way he may very readily obtain the character of an idiot or an imbecile.

I have spoken of stammering as the result of derangement of the nervous system. It is so often said to be produced by imitation, that some further remarks on this head may be necessary. I cannot pretend to bring the numerical system to my aid—I cannot exactly say how many out of a hundred stammerers are of the sanguine or the athletic temperament, but this I will affirm, that having had ample opportunity of observing numbers of persons thus affected, I believe an athletic, sanguine, or a phlegmatic stammerer to be very rare. The affection occurs in persons of extreme susceptibility, whose constitutions would readily make them the subjects of hysteria or chorea. This nervous susceptibility may be caused by sickness in childhood. This is the remote cause.

One exciting cause may be this, that persons who are thus susceptible may be so readily carried away by strong feelings, that in the hurry and earnestness to express their ideas, they crowd their words so rapidly upon each other as to produce stammering. They are constantly the subjects of those ardent emotions, that are occasional causes of stammering in good speakers. This is not a place for me to discuss the connexion between thought and words, otherwise I might prove that the time required for the articulation of a single word, is sufficient for a long train of thought to pass through the mind. Now, the earnest endeavour to express thoughts as rapidly as they are conceived, will produce stammering. This is what we often witness in persons who are not stammerers.

Fear is often an exciting cause of stammering. A child of the constitutional susceptibility spoken of above, may be made a stammerer by bad treatment. If he is in constant awe of a brutal parent or master, this is a sufficient cause. In regard to imitation as a cause,

I believe it to be comparatively rare. From the known tendency of chorea and hysteria to be extended by imitation, we might imagine this to be a more frequent cause than it actually is.

It is not my present purpose to write a detailed or a systematic treatise upon impediments of speech; I design, merely, to offer a few hints upon a subject which appears to have been little investigated by medical men, and which is certainly very little understood.

An extract from a letter of Richard Cull, quoted in the *Medico-Chirurgical Review*, for October, 1836, may serve to give an idea of the present state of medical knowledge on this subject.

"It would be tedious to enumerate the various methods that ignorance, empiricism and imposture have, at various times, proposed for the cure of impediments of speech. From the farmer in Joe Miller, who made his son sing 'Daddy your honso is on fire,' down to Mrs. Leigh, the lady in New York, who forces her disciples to keep the tongue against the teeth uninterruptedly for three days, the plans have been innumerable, the proposers confident, and the success, of course, immense. Yet, singular as it would seem, although each is perfectly successful, the one that follows is advanced expressly because no such thing as success can be obtained. How this paradoxical state of things may be explained we leave to others to determine."

Of Mrs. Leigh's system, and the above amusing misrepresentation of it, I will speak hereafter.

There are two different species of stammering, which I shall describe. The first is that in which the organs of articulation, the lips and tongue are concerned. In the second, the organs are not in fault, but the voice is wanting. The effort to speak is made, the lips and tongue move, but the voice will not come. A person who witnesses this attempt, will believe that the individual has spoken, and ask him to repeat what he has said. The two kinds are frequently united. Indeed, when the voice is not at the command of the patient, the violent efforts he makes to speak will produce convulsive motions of the features and distortion of the countenance. A habit will be formed by the nerves and muscles, and these irregular motions will afterward take place, even when the voice is under command. A paroxysm of stammering is truly formidable to witness. The countenance of the patient is horribly distorted, inarticulate and dissonant sounds issue from his mouth; he will tear his hair, stamp as if with rage, and practise all the gestures of a madman. Even in less violent cases, the whole nervous system is in intense agitation, every nerve in his body, to the ends of his fingers and his toes, seems to him to vibrate, like the strings of a harp, producing a sensation like that caused by the filing of a saw, and he feels a sense of suffocation at his chest. I may mention, incidently, that stammerers are said, in general, to have

narrow chests, and that their lungs have not free play. My experience as far as it goes, confirms this. A narrow chest also, is said to be one of the characteristics of the nervous temperament. I have seen some athletic stammerers, at least one or two, but the most I have seen belong to the nervous class.

The first species is what is properly called stammering, and consists in the simple repetition of the same sound over and over, attended with convulsive motions of the lips, tongue, and muscles of the face. This is infinitely more disagreeable, and apparently worse than the other. It is, however, much more readily cured. The second species is more purely dependent upon an affection of the mind than the first. I think it in general, if not always, is the result of the first species. The fear of stammering produces that embarrassment which causes the voice to fail, either by closing the glottis, or by causing the patient to inhale when he ought to exhale.

It is well known that singers, when embarrassed, are incapable of uttering a single note; their voice is gone. In the same manner, a speaker before a public assembly sometimes loses his voice; and the more anxious he is to speak—the greater exertion he makes—the more totally unable is he to bring forth a sound. The more powerful passions, also, such as grief, fear, anger, and even excessive joy, completely take away the power of utterance. They not only, in many cases, deprive the subject, of the power of distinct articulation, but even of the ability to produce a sound: the vocal passage is spasmodically closed. Thus a person is said to be choked with rage. The same passions, in a less degree, will produce the first species of stammering in persons whose ordinary utterance is fluent.

I may be asked, if singers are thus subject to loss of voice, why does not the same thing oftener occur in regard to speech? I answer, because singing is merely an accomplishment; it is acquired by study and effort; whereas speech is in general so early learnt, that it may be almost considered spontaneous. Men talk without previously considering in what manner they are to move their lips, where the voice is to come from, how the sound is to be produced, or what organs are to be set in motion. A man wills to move his arm, his arm moves; he wills to speak, and the words are uttered: one is as little the object of thought as the other. I may here remark, too, a curious fact; that it is impossible for a stammerer to stammer by design. Desire him to stammer; let him make the attempt, and he will speak as freely as any one. Of course I do not refer to those stammerers of the first species, the vicious habit of whose organs is so confirmed that

they can never articulate without stammering. This, however, is a rare case.

But let us alter the natural order of things. Suppose we could make speech as much a matter of education as singing. Let us take a young person of considerable susceptibility; impress upon his mind the idea that speech is a subject that requires great thought; that it is of vast importance for him to educate his voice and his organs of articulation; and very probably when you introduce him into company, his voice will utterly fail. I have already said that I believe an impediment of the second kind to be the sequel of the first. A child is afflicted with stammering, and the constant and unsuccessful efforts made to overcome the defect, produce so powerful an effect on his mind, that whenever he attempts to speak, the fear of stammering, the constant thought as to how he is to speak, the constant dread of failure, deprives him of voice. Parents may learn from this the extreme necessity which exists for caution in subjecting a child who stammers to a variety of methods for its relief. No trial should be made at home. An experienced person should be selected to make the trial. I mean the person, if any such can be found, who has had the greatest experience in the treatment of defects of speech: and if none such can be found, or if, after a reasonable length of time, the trial fails, none other should ever be made. And this caution should be kept in mind: that in subjecting the child to a course of treatment for the removal of the defect, you fix the matter so much in his mind, that if not relieved, it will be aggravated and confirmed.

But to return to the analogy of singing—we have then only to make speech as much a matter of education, as much an accomplishment as singing, and the performers will be as liable to loss of voice, when embarrassed, as singers. Of course there would be the same difference between the bold and confident and the diffident and reserved, in the one case as in the other. Many persons may find it difficult to conceive that they could, under any circumstances, be thus deprived of the power of speech. But these same bold speakers, if possessed of musical powers, would be equally bold singers.

It is well known that a single idea, constantly dwelt upon, produces madness: in like manner, the idea of the importance of correcting a bad habit of speech may be carried so far as to become a monomania. Thelwall, who has given, I think, a very accurate description of the varieties of impediments of speech, says that there are some forms which bear a close relation to mental derangement. This remark may be still further strengthened by the instances of those defects of articulation produced by blows on the head.

I have made a reference to Mr. Thelwall's letter, and also a quotation from Mr. Cull's. The latter alludes to the numerous methods of cure which have been represented by their authors as completely successful, and all of which seem to have failed. From the knowledge of the subject that Mr. Thelwall exhibits, I have no doubt of his ability in the cure of impediments of speech. I believe that there are now many persons who have devoted themselves to the observation and treatment of this defect, who are capable of curing it. One principal reason that many of the cures are not permanent is, that the teachers require too little time. A habit that has been confirmed by years cannot be eradicated in a few weeks. The best musical teachers now inform their pupils that the art of singing requires years of practice and instruction. In the same manner does it require years of practice under the direction of a competent instructor, for a stammerer to acquire the free use of speech. The same thing that occurs in other chronic diseases takes place in this. A patient applies to us for the cure of distorted spine. He is told that he cannot be cured under a year. After pursuing the proper course for three months, he finds himself very much benefitted. Having now acquired the habit of using the various machines with facility, and convinced that the means prescribed will complete his cure, he requests our permission to return into the country. The country air will be beneficial to him; he can carry his weights, his pulleys, his triangle, and all his other apparatus with him. He arrives at home, and amid the excitement of meeting his friends, and the exhilaration produced by their congratulations on his amendment, his exercises are neglected. A few days or a few weeks can make no difference; time passes, and the longer he neglects it the greater is his reluctance to resume the wearisome course he formerly pursued. By and by, he finds the disease once more making progress, and now very probably he loses confidence in his surgeon, and in the course he formerly thought so successful. It is the same in other chronic diseases. What physician is there who does not feel that the moment his inspection is removed, the rules he has laid down will probably be pursued with less energy than before? But ought this to bring discredit upon the physician, or upon the means employed? Certainly not.

The cure of impediments of speech is now much better understood, by those who have devoted themselves to their treatment, than it was twenty years ago, at least in this country. Mr. Thelwall's letter, and his *Results of Experience*, were published in London in 1810 and 1814, and although there can be no doubt that he performed the cures he describes, yet his book throws no light on the subject. Having

much experience of the methods formerly resorted to, and which were in fact merely experimental, I can affirm that many of them were more calculated to confirm than to eradicate the defect.

Despite of all the ridicule that has been cast upon Mrs. Leigh's system, by those who knew nothing about it, I believe the inventor of this system deserves the credit of the improvement. As it was at first taught empirically, the pupils being obliged to take an oath not to reveal the secret, many amusing misconceptions arose in regard to it; the pupils often purposely misleading those who subjected them to troublesome inquiries. Hence arose the brilliant discovery that was published in our daily papers at the time when it was taught in Boston by Mr. Wilson. I mean the discovery that the system consisted in obliging the pupils to keep their tongue in contact with their teeth three days in succession.

Mrs. Leigh's system exceeded all others in the marvellous rapidity with which the cures were wrought, and it was this very incredible rapidity that brought ridicule upon the system. Any thing that gives a system the appearance of the marvellous, is sufficient, in our day, to cause its rejection. Yet the phenomena of the human mind are no better understood than they were formerly. There is a practical disbelief with regard to the existence of mind, but still its action upon the body cannot be at all understood. We are every now and then meeting with instances of this action of the mind or the imagination upon the system which are, to all appearance, miraculous. But, to put the power of the imagination out of the question for the present, the apparent miraculousness of these cures disappears when the system is understood.

A deaf person may be made to hear instantaneously by giving him an ear trumpet; in like manner a person may be made to talk freely by telling him how to talk. I am well acquainted with a gentleman who formerly stammered as much as an individual could do, and in the way most disagreeable to witness. He was cured in half an hour. He required, it is true, superintendence for some time afterwards, but he was always a rapid speaker; and though he formerly stammered most furiously with lip and tongue, his defect never made him refrain from speaking. The consequence was, that the moment he was put in possession of a mode of speaking freely, his words flowed forth with the utmost volubility. Though it is now some years since his cure, his impediment has never returned; and neither in private or in company can any difficulty be observed in his utterance. Other patients were cured as rapidly, and in some cases the cure was permanent.

In many cases, however, the patient on his return home gradually relapsed into his former condition.

The* inventor of Mrs. Leigh's system, (for Mrs. Leigh was not the inventor) a medical gentleman of high talents and very strong natural powers, had a daughter afflicted with stammering. After attentive observation and long study of her case, he succeeded in hitting upon a method which effected a cure. This method was imparted to the young lady's instructress, Mrs. Leigh, an Englishwoman, in order that it might be pursued during school hours.

The inventor soon determined to extend its benefits to others. Finding Mrs. Leigh enter into the scheme with zeal and ability, he placed her at the head of the institution; and fearful of the reproach of empiricism, he chose it should pass under her name. Pupils soon flocked to them, they acquired experience and brought their system to perfection. The marvellous rapidity of the cures brought them immense numbers. It would not have seemed possible that what appears to be a rare defect should have proved to be shared by so many. They soon found it expedient to qualify other teachers, who established themselves in all parts of the union. Mr. Wilson, a very intelligent young man of unwearied industry, taught the system some time in Boston. The results here, as in New York, appeared wonderful; and if they were not permanent, the fault was in the short time allowed for the cure. The time Mr. Wilson fixed was six weeks, but many of the pupils believing themselves cured, remained not half that time.

Two great mistakes were undoubtedly committed. The first was, in attempting to make permanent cures in so short a time. The second was, in attempting to qualify so many teachers. Most of them, probably, believed that the possession of the secret was all that was requisite. They were not aware that years of observation and experience, a knowledge of elocution, a knowledge of the human mind and of human nature, were requisite to make them successful teachers. It is the same with this as with other diseases. If we had certain remedies for certain diseases—if for instance a certain dose of calomel would cure every case of fever, the science of medicine would be perfectly simple, and might be practised by a child. But the skilful physician adapts his remedies to the particular constitution of his patient, and to the greater or less development of particular symptoms. It is symptoms he is called to combat, and the symptoms in no two cases are the same. Now the power to do this is only to be

* Dr. Christopher C. Yates, of New York.

acquired by attentive observation and experience. This remark applies with still greater force to impediments of speech. In the treatment of no other complaint is experience more essential than in this. I need not mention also, that unwearied industry and patience are requisite on the part of the teacher as well as on that of the pupil. This fact may afford some light as to the reason why a method successful in the hands of the inventor generally fails in the hands of others. No methods invented for the cure of stammering, have met with general success, because such methods are incommunicable, at least by writing. A successful teacher may be able to communicate his art to another of sufficient intelligence and industry, but it cannot be done at once, any more than a man ignorant of music can become qualified by a single lesson to teach music.

The gentleman who invented Mrs. Leigh's system was qualified for the purpose as few men can be. Not destitute of sufficient learning, he has yet little reliance on books, and depends upon observation, principally, for his sources of knowledge. Possessed of a tall and commanding figure, with an air of confidence and decision, he inspires his pupil at once with perfect confidence. He tells his patient *how* to speak; he tells him he *can* speak; and he *does* speak.

The effect of imparting their method to so many teachers, was soon apparent. The cures obtained were so numerous and wonderful, and attended with so much profit to the teachers, that multitudes of other persons soon set up to cure impediments of speech. It is not surprising, therefore, that the system soon fell into disrepute.

The inventor, at first, gave directions merely for the position of the tongue, but afterwards he made great improvement in his treatment. The suppression of the voice he believed to be caused by a spasmodic closure of the glottis, the same cause to which Dr. Arnott ascribes stammering.* The patient, in his violent and ill directed efforts to speak, closes the glottis, and hence the sound cannot escape. He makes motions with his lips and tongue, but the more violent his efforts, the more firmly is the glottis closed. The object of first importance, therefore, is to get the glottis open, the next is to keep it so.

The foundation of all rational systems taught for the relief of stammering, are based upon two well known facts. The first is, that slowness and deliberation are requisite for perfect speech. The second fact is, that stammerers can sing with great facility. In singing

* Dr. Arnott, in his work on physics, considers stammering in every case produced by spasmodic closure of the glottis. Dr. Yates holds the same opinion; and it is remarkable if, as I believe to be the case, the opinion of each was formed from his own observation and was original with both.

the sound is continued from syllable to syllable, and word to word, more than in common speech; there is less emphasis, less interruption of sound. Hints have been taken from this fact, and various methods invented to prolong the sound in this manner, and prevent its interruption until the speaker arrives at the end of his sentence. So long as the stammerer can prolong the sound in this way, he can speak with ease; his great difficulty is in the commencement of a sentence and in avoiding interruption in breaking the sound into syllables.

An attention to the patient's manner of inspiration is, therefore, of importance. Instructions are given for inhaling with deliberation, and for husbanding the breath, so as to let it out no faster than is requisite for the formation of sound, and without panting or any sudden or spasmodic effort. Directions must also be given as to the particular manner in which each consonant is pronounced, and for the articulation of any particular words or sounds which are difficult to the pupil. These must be taught, and any vicious pronunciation corrected by precept and example. For this purpose, an acquaintance with the principles of elocution, and with elementary sounds, is requisite. It is by imitation only that the proper manner of uttering them is to be acquired, and the organs habituated to it.

Mr. King, the teacher of elocution, who gave lessons in Boston in 1835, for the cure of stammering, was well qualified in this respect from his knowledge of elocution, in which he was an able instructor. This, and his experience in the treatment of impediments of speech, rendered him a very competent teacher. I believe his method to be adequate to the cure, if pursued with sufficient attention and perseverance, and for sufficient time. Mr. King's system requires more labour on the part both of teacher and pupil than Mrs. Leigh's. He aims less at producing rapid and striking results. But he puts into the hands of his pupils certain rules, which, when they have attained proficiency in them by imitation and practice, will enable them to cure themselves with perfect certainty, if they are not wanting in perseverance. In this respect, the system is more tangible than Mrs. Leigh's. It is more capable of being continued after the pupil is deprived of the aid and superintendence of the teacher. Mr. King assigned one year as the shortest time in which the defect can be eradicated. He did not, however, require that the pupil should remain all this time under his inspection.

According to Mrs. Leigh's system, the pupil was kept in the house of the instructor, so as to be under his eye during nearly the whole time; so that he was made conversant with the method in less time than by Mr. King's course, who gave lessons of one hour a day. Now

it will be much better for the pupil, especially if an adult, to receive instruction for an hour a day for a year, than to be with the instructor the whole time for a fortnight. For children, the best plan would be for them to be with the instructor all the time during two, four, or six weeks, according to circumstances, and afterwards receive an hour's instruction daily for a year. Of course it is not to be expected that this hour daily will be sufficient; the pupil must practice by himself several hours, and he will do this more regularly while he continues to take lessons, and will also avoid errors in his practice which an individual, whether child or adult, will insensibly fall into, if left entirely to himself.

Dr. McCormac, of Edinburgh, published a treatise on the cure of stammering in 1828. The following quotation, from his preface, appears on his title page.

"I can assure all, that by the most ordinary attention to the following pages, they may of themselves remove, with the utmost ease and facility, and in a very short space of time, the most inveterate and confirmed habits of stuttering, no matter of how many years duration or when contracted."

This is being pretty confident. Dr. McCormac's observations, however, do not appear to be the results of experience; his treatise has never obtained much attention, and I do not know that since he published it, he has ever added or improved what was then mere theory. If he had tested it, by devoting himself to the cure of stammering, it is highly probable he would have become very successful. Experience would have led him to modify his theory very essentially. As it is, his treatise fails in the object aimed at, because defects of speech cannot be cured by a book. We cannot learn to sing from a book, neither can we learn to speak. A stammerer learning to speak is exactly in the position of a person learning to sing. A singing master can teach a pupil of sufficient industry to sing, and a person experienced in the treatment of impediments of speech can teach his pupil to speak freely and well, provided sufficient time and pains be taken.

It seems that, while travelling in America some years since, Dr. McCormac's attention was attracted by the well confirmed success of Mrs. Leigh's system, which was then taught under oath of secrecy at New York.

The desire that results so beneficial should be placed within the reach of every one, led him to reflect much upon the causes of stammering, and he finally came to the conclusion that the "proximate cause in most cases arises from the patient endeavouring to utter words, or any other manifestation of voice, when the air in the lungs is exhausted, and they are in a state of collapse, or nearly

so." This is the discovery upon which he rests his claim, and this is the foundation of his system. But, if what I have said above be true, it will be seen that this is only one form of stammering. The vicious habit of the articulating organs may exist independently of any deficiency of voice. Dr. M'Cormac's directions for inhaling, if practised upon, are more likely to lead the patient astray and to confirm a bad habit of inhalation, or produce one equally bad, than to remedy the difficulty. Without doubt an attention to the manner of inhalation, where the voice is in fault, is of the first importance; means must be taken to keep the air passages open, and to prevent any attempt at speech with the lungs in a state of collapse. If the person attempts utterance by inspiration instead of expiration, he will succeed only in producing with great difficulty a monosyllable, and the effort will be attended with great exhaustion. I do not see that it makes much difference whether we describe this as an attempt to speak with the lungs collapsed, or with the glottis spasmodically closed. The simple fact is, that the breath is not expired at the proper moment to produce articulate sound, and it is emitted in irregular jets. The patient must therefore be taught to respire slowly, regularly, and without effort. Dr. M'Cormac says also, and truly, that the patient having acquired a vicious habit of utterance, he must be carried back to the beginning, and taught to speak entirely over again. Unfortunately, he has not only to learn to speak anew, but he has to unlearn a bad habit of speaking. Herein is the almost absolute necessity of a teacher, or at least an assistant. The vowel sounds are generally uttered without difficulty by the stammerer; they come from the throat without any action of the muscles of articulation, and hence they come out with ease. The difficulty is with the consonants. It is therefore necessary for the stammerer to have some one with him to remind him of every vicious attempt at speech, and to show him by example how the sounds are articulated, the position of the organs, etc. This is to be learnt only by imitation. Now this practice is to be continued until the bad habit is corrected and the new one formed. Nor is the patient safe then. Until the new habit of utterance is confirmed by time, the patient is constantly in danger of a relapse. A study of the proper manner of pronouncing the elementary sounds, and an attentive observation of the defects of speech, are absolutely necessary for the teacher.

It is not my intention, however, to give a detailed account of the different methods proposed for the treatment of impediments of speech. From what I have already said, it will be seen, that I consider it in a great measure a mental disease; perhaps I might call it a monomania.

Whatever may be the case in children, I believe it seldom continues in adults, unless kept up by mental causes. Moral remedies, therefore, are of the first importance.

It may not, however, be uninteresting to glance briefly at some of the methods formerly employed.

The best known and the most ancient of these is the Demosthenic. We are told that Demosthenes, among other means for the removal of his defective utterance, adopted the plan of speaking with pebbles in his mouth. The sanction of a great name, the well known celebrity that Demosthenes acquired as an orator, rendered this method popular. It has, therefore, been much resorted to for the cure of stammering, and various modifications have been invented. The use of pebbles, or a small piece of money held over or under the tongue, or a pea held in the mouth,—have been devised, and stammerers subjected to these processes in the course of the various experiments made upon them. M. Itard invented a platina or gold plate for this purpose, which being forked and adapted to retain its position under the tongue, could be held more conveniently than the pebbles. Now we have no account of the particular species of impediment with which the Grecian orator was affected. There is no doubt, however, that either he or his preceptor in elocution adopted the use of pebbles for the correction of some particular vice of utterance, probably in the motions of the tongue. Now it is to be recollected, as I have already stated, that the want of command over the voice, or over the organs of articulation, occasions violent and convulsive motions of all or particular organs in different persons, so that the most opposite effects are produced. Thus, some attempt to speak with their mouths stretched convulsively open, others with them spasmodically closed; some have improper habits of moving the lips; others of moving the tongue. Now, to attempt to cure a defect which does not exist, will produce the opposite defect, and even a plan wisely devised to remedy one vice, if it be persevered in after it is removed, will produce the opposite. For instance, if a stammerer who attempts to speak has his attention directed to keeping his mouth open, he will be likely, if not watched, to acquire the habit of attempting to speak with the mouth spasmodically open.

One method which I have known employed for the cure of stammering, was that of directing the pupil to press his lips firmly together, and dwell for some time upon the consonants, which he was directed to pronounce with force. This was undoubtedly devised with the idea of giving strength to weak parts: but there could not be a better plan to produce stammering, or to confirm it if it already existed.

Some stammerers are said to have been cured by learning to speak a foreign language. As the pupil in this case is required to take lessons in pronunciation, and to speak the words after his instructor, until he obtains the right sound and accent, we can easily understand how the effect is produced. If the pupil is so far interested and engaged in the acquisition of a new tongue, as to forget his impediment, he may be cured in this way; but if sensitiveness predominate, the embarrassment of endeavouring to express himself intelligibly and grammatically in a strange tongue, is added to his habitual embarrassment, and increases the difficulty in a tenfold degree.

Some instructors of schools have cured stammerers placed under their care, by calling to them the moment they begin to stammer, and obliging them to stop and commence their sentence anew. Here the same remark applies as before. The sensitive stammerer becomes confused at being thus spoken to; he forgets what he has to say, and is besides in a constant tremor for fear he shall be thus interrupted; and hence his liability to hesitate is increased.

The practice of slow and loud reading, has been generally recommended. Of the utility of this, there can be no doubt; but the attention should be directed as little as possible to the impediment.

Dr. John Bostock published in the 16th vol. of the *Medico-Chirurgical Transactions*, an account of stammering in a plethoric subject; cured by the use of cathartics continued for eight years. The patient was a child of two or three years old when this defect of speech suddenly commenced. The effect of a cathartic was almost immediately perceptible. From the account of the case, however, it is evident, that it was more purely a disease of the nervous system, and more closely allied to chorea, than stammering usually is, and the strict diet enforced, was of more importance than the cathartics.

Learning to sing, has also been generally recommended. This must be highly beneficial, provided the sensitiveness of the pupil do not interfere here again. He must be taught to sing as an amusement merely. If he learns it as an accomplishment or as a means of cure, his voice will be liable to fail him.

Most of the methods which individuals have devised for their own cure, apply to the correction of particular defects, and should no more be used indiscriminately than calomel or venesection in every case of fever. One observation may, however, be made here, which is, that where there is not a great degree of sensitiveness, and where the patient has not already been subjected to previous experiments for his relief, any one of them may succeed merely through its influence

on the imagination; or from drawing the patient's attention to the practice of the method, and diverting it from his impediment. Experiments, however, should never be made: if they do not remove, they will confirm the defect.

Having thus glanced at several of the methods of treatment proposed, I come now to the consideration of the course I judge most beneficial.

I may be asked, if I maintain the importance of an experienced teacher: can parents who have children thus afflicted, do nothing themselves? I answer that they may do almost every thing. With children, almost every thing can be done by moral treatment; and according to the moral management they meet with, will the disease be confirmed or eradicated. The subjects are generally children of extreme nervous susceptibility and of feeble constitutions. The ordinary means for producing vigour and robustness, and for strengthening the nervous system must be resorted to. The muscular system must be developed as far as possible. If the chest is narrow and contracted, every means must be employed of bringing into action the muscles of the arms and chest. For this purpose gymnastic exercises, the use of dumb bells, and various sports may be recommended. In this way, a great deal may be done to produce fulness of the chest. The child may be encouraged in the practice of these exercises as a means of acquiring physical strength, without his attention being called to his defect of speech.

As soon as he is capable of reasoning, let him be driven as much as possible into the society of other children. If his defect is laughed at, let him be habituated to bear ridicule without flinching; let him be taught that those whose feelings allow them to ridicule defects or deformities, are much more worthy of pity than the subjects of those deformities. Let him be carried to the abodes of the deaf and dumb; teach him how much happier he is than they, how great a blessing he enjoys in the use of speech, even if his speech is imperfect. Carry him also into the presence of the blind, the lame, and the deformed. Let him be familiar with the sight of those who are greater sufferers than he.

If you pursue an opposite course—if, because he is sensitive to the ridicule of other children, you let him remain at home, if you impress upon his mind the idea that he has a defect which *must* be removed, and which will be an insuperable bar to his progress in life, unless it is removed; if you allow him to perceive your constant anxiety for his cure, he will get the idea that there is something pecu-

liar in his case—that he is marked out from mankind, as if the seal of Cain were set upon his brow; and that until he is freed from his curse, he can never associate with his fellows without shame.

On the contrary, you should direct your principal attention to convince him that his fate is not an uncommon one; that defects and diseases are the common lot, and assigned for wise purposes. In as far as you direct his attention to his defect at all, let it be with this object—to convince him that it is not an evil. Teach him resignation to the will of God. Impress upon his mind above all things, that he is under the constant protection of a being who knew what was best for him, and who has placed him in the condition and under the circumstances best adapted for his welfare. Priestly attributes the greatest blessings he enjoyed to his impediment of speech; and others may in like manner trace to the same cause, their preservation from much evil, and their possession of much happiness. Our greatest felicity is often produced by what we regard at the time as our greatest misfortunes.

When he begins to feel the importance of a free use of speech (and he may feel the importance of it without being morbidly sensitive on the subject,) and disposed to enter upon a laborious course of discipline, seek out a person who has experience in the treatment of impediments of speech. Place him under his care, and if he is beaefitted, do not remove him and think to perfect the cure yourself. Recollect if one of your other children is learning to sing, you would not think of taking the task of instructor upon yourself, as soon as he had made progress. Three months is a very short time for him to remain under the superintendence of an instructor; six months is better, and where it is practicable he should remain a year. If this interferes with his other studies, it is of no consequence. He will derive benefit enough to compensate for the loss. The age I would fix upon for this trial, should be from eight to twelve. Some children, however, are as mature at the former age as others at the latter. At this period, the loss of a year's study may perchance be a gain. To a child of nervous habits, the time allowed from his instruction in speaking, may be much better employed in acquiring health and vigour, by play and exercise, than in study. But if the child is not disposed to enter into this course, if he is irritable and indocile, and regards it merely as an irksome task, it will be better to wait till a more advanced age shall convince him of its importance. Otherwise we run the risk of increasing his irritability and sensitiveness.

Should this attempt fail, none other ever ought to be made. The child should be engaged in active pursuits, and induced to be in

society as much as possible. If his excessive mental susceptibility leads you into the belief that he has superior powers of mind, do not fall into the mistake of thinking that these mental powers must be cultivated. For in so doing, you are increasing his susceptibility, and rendering him miserable. The more ambitious he becomes of mental distinction, the more keen will be his sense of the defect that renders him incapable of displaying his talents and acquirements to advantage. He should be led to look forward to an active—not a literary life. He will be happier as a carpenter than as a professional man. But without resorting to a trade, there are employments enough in which he may gain wealth, and honour, (in our days we place wealth first,) and in which his impediments will be no obstacle to his success.

In very few cases, however, if the course of moral treatment I have recommended were pursued, would the complaint continue. In most cases, the moment you reconciled the mind of the patient to his defect, the moment you relieved him from the fear of stammering, he would speak freely. This is confirmed by the cases above mentioned of rapid cures produced by Mrs. Leigh's system. The patients came to the instructor fully impressed with the wonderful cures they had heard of. The appearance of the latter, his manner and voice confirmed the impression, and when he told them they could speak, they believed him, and spoke without fear, and therefore without impediment. The mere lip and tongue stammering of children is readily cured, if the mind do not share in the disease. As they grow older they are generally capable of curing themselves. We often meet with adults who were stammerers when children, but who cured themselves, or outgrew the disease as they acquired strength. On the other hand, adult stammerers are comparatively rare. Still more readily can the defect be removed in such cases by experienced instructors.

Moral management is, therefore, all important. In most cases it will alone be sufficient to effect a cure; and in cases where it does not, it will render the cure easy to a competent instructor. I would again urge the impropriety of subjecting the patient to a new trial if the first fails. I would urge most strenuously the necessity of leading him to the choice of that pursuit in which his defect shall afford the smallest obstacle to his progress. He is to be taught to look upon it as a necessary evil, and to shape his course accordingly. He is not to be led to bear it in his mind as the prime obstacle to his success, which must be removed before he can be happy. The molehill is thus magnified into a mountain. Whatever side he looks upon, his impediment rises up before him, shutting him out from the road to distinction. It

comes to occupy so large a share of his attention that he becomes a monomaniac: on this subject, he is actually insane: there is this little diseased spot in his mind: fortunate will it be for him if it does not affect the whole; if the gangrene do not extend over all his feelings.

The characters of Lord Byron and Sir Walter Scott afford a striking illustration of the power of education to modify the effect of natural or early acquired defects, or deformities, upon the disposition. Both were the subjects of physical defects. Byron, the victim of a bad education, had been the object of various attempts to relieve this defect. This and his exposure to taunts upon the subject, fixed it in his mind; and produced a sensitiveness akin to madness. Throughout his whole life he evinces strong marks of natural benevolence and philanthropy, but he believed himself marked out from mankind, and his very best feelings turned to bitterness and misanthropy. Scott, on the contrary, whose education was very different, was rendered by his defect a more social being; more ready to enter into the feelings of those around him. It called forth his sympathy for the troubles of others. Scott was taught to bear his defect with resignation, as a necessary evil: Byron to look upon his as a disgrace which must be removed. Had Byron's feelings been soothed instead of being irritated; had he been made to witness the diseases and deformities of others, and taught how many of the same rank in life were greater sufferers than he, we might have witnessed in him all the ardour of a philanthropist. Few persons, I believe, understand how nearly philanthropy and misanthropy border on each other. The same keen sensibility, rightly directed, gives birth to the one, and wrongly directed, to the other.

"The keenest pangs the guilty find
Are triumph to that dreary void,
That leafless desert of the mind,
The waste of feelings unemployed."

It is said that Howard, if he could not have given vent to his feelings in action, would have been a madman. I will add he would at least have been a misanthrope. Strong feelings unemployed will turn to bitterness.

To the person whose age renders him the director of his own course, I would give the same directions. The same rules that must guide parents in the management of children, should guide him in the work of self education. The first work the stammerer has to accomplish is the regulation of his mind; the acquisition of perfect self command and of mental calmness. When this is done, the rest is easy. Until it is done, it is in vain for him to attempt by physical means to over-

come his defect of utterance. The first embarrassment he meets with may cause its return. When he has brought himself to feel his impediment less keenly; to be less morbidly susceptible on the subject; then, if he is not already cured, let him apply to a person experienced in the treatment of stammering. If he meets, there, others who are afflicted as he is, it is all the better; he will no longer look upon his case as a peculiar one; and if he sees others whose impediments are worse than his, it will give him additional courage.

But great labour and perseverance are necessary in the employment of the physical means, in overcoming the perverse habits of the organs, and training them to articulate correctly. I would advise him, if it be possible, to pursue the method in the place of his usual residence, and while he continues his ordinary employments. An individual may leave his customary abode and pursuits, and go to a neighbouring town or city for his cure. His ordinary trains of association will be broken off, and the new mode of speech will be more readily adopted while he remains absent. But the moment he returns; the moment he resumes his former avocations, and is subjected to his customary objects of anxiety, his former mode of speech returns. This difficulty, indeed, is less in proportion to the length of time allowed for the cure to become confirmed; but were this even a year, still the cure will be less permanent than if made under the circumstances by which he must be ordinarily influenced. The remarks I have made as to the length of time required for the cure of children, apply still more forcibly to the case of adults. The more confirmed the habit, the longer the time requisite for its eradication.

Dietetic and medical means may sometimes be employed by the adult with advantage. If, as is most probably the case, the patient is of a nervous temperament, means must be adopted to strengthen the nervous system, and impart vigour to the frame. No one can doubt, that in stammering, the nervous system is always more or less in fault. Now, the disorderly action of the nerves is said to be the result either of *entony* or *atony*; of too much strength or of too much weakness. In the former case, spare diet and antiphlogistic measures are necessary: in the latter, a tonic regimen.

Attention to diet is extremely important. The patient has need of all his powers of mind in their greatest vigour and clearness. He must, therefore, cautiously avoid all stimulants, even meat, unless his health requires it. The excitement produced in the system by stimulants, disposes to mental lassitude, and unfits the subject for vigorous efforts of self-discipline. Animal food in like manner, has the same effect, though in a less degree. I would not, however, recommend

entire abstinence in all cases, from animal food, but only extreme moderation in diet in general, and particularly in regard to meat. This I recommend as calculated to qualify an individual for vigorous mental exertion and the possession of self command. The body must be mortified to bring it under subjection to the mind. Stimulants, moreover, excite the nervous system to irregular action. This is peculiarly the case with tobacco, and hence its use is improper. All excitement of mind or irritation of body must, in as far as is possible, be avoided or controlled. If a good speaker will stammer when under the influence of excitement, still more will an habitual stammerer.

There may be some cases in which the moderate and regular use of wine will be found beneficial; but these cases are rare, and in them the wine will be found to act as a sedative, not as a stimulant; not to produce excitement, but to check it by giving tone to the nervous system. Some persons, also, of nervous habit, may be rendered more excitable by abstinence; and their nervous system will be kept in best order by a simple but somewhat generous diet. In fine, the whole system must be kept cool by moderation, the bowels free, and every thing that excites the nervous system should be carefully avoided.

In regard to the discipline of the organs of speech, an experienced instructor, as I have repeatedly said, is of the utmost importance. Mrs. Leigh's system is still taught by its inventor in New York. That system will do all that physical instruction can do. Mr. King's system also, to which I have before referred, I also believe effectual. Mr. King I think now resides in Baltimore.

But if the patient cannot obtain such aid, what course is he to pursue? I am not sure, but what it would be best for him, to endeavour to banish the subject altogether from his mind. In regard to children, I have before alluded to the danger of subjecting them to experiments. With them it is far better, if a good teacher cannot be obtained, to attend only to the moral and physical discipline I have recommended, than to fix the idea of their defects on their minds, by trials, the results of which are altogether uncertain. A much fairer chance of relief is thus afforded them. There is one thing I might mention, which would be beneficial. Teachers of schools are apt to excuse pupils who stammer from exercises of reading and declamation; both from compassion to the unwillingness of the pupil to perform, and from the disagreeable effect on the hearers. But unless the impediment is of the worst description, it would be infinitely better for the pupil if he were induced to read and declaim with the others. It would be a useful exercise for him; it would strengthen his voice and overcome his fear of speaking before others. Besides, most stam-

merers can read and declaim better than they can converse. There ought to be no distinction of any kind made between the stammerer and other pupils.

For adults, the practice of reading aloud when alone, for two or three hours daily, and in the loudest possible tone, will be productive of the greatest advantage in strengthening their voice, and bringing it under their command. There is this benefit in this practice, that it does not keep the attention fixed upon the impediment. In the discipline of the organs, if they can obtain any one to assist them it will be all the better. They should habituate their organs to the pronunciation of those sounds which they find most difficult. The consonants alone, and in combination, will require most attention, and the pupil's friend must remind him when he is wrong. He should pronounce the difficult sounds for him, and let him see the way in which these are pronounced. The false motions of the tongue, lips, etc., must be corrected, and they must learn the proper position of these organs. Great care must be taken to keep the mouth well open, and to make no attempt to speak when the lips are too near together. The lips should never be forcibly compressed, they should but slightly touch, and immediately be brought apart as if with a rebound. Singers are instructed to keep their mouths constantly open, wide enough to admit two fingers between the teeth. Now, it is not meant of course, that they should not close their lips, because then it would be impossible to articulate; but only that they should commence with their mouths fairly open, touch the lips and teeth together only when required for the formation of labials and dentals, and instantaneously bring them back to the former position. This rule must be observed by the stammerer. He must separate his lips or teeth at the very instant they touch; and their resting place must be at some distance apart.

The pupil when he wishes to speak, must first place himself in a position perfectly easy and natural. The next thing is to open his mouth—for he cannot speak without his mouth is open. His third object is to obtain command of sound. The utterance of a vowel, or commencing a hum, will serve to open the glottis, and give him a command of voice. This should be done in a manner perfectly easy and natural, and without the least effort. If an effort is made, the patient draws in his breath, and the attempt at utterance takes place in this situation—with the breath stopped. Having the command of sound, he can speak freely. Hence the importance of attending to the method of inhalation. The gradual and gentle emission of sound should be practised. We have already seen that much benefit may

be derived from learning to sing. Besides, the peculiar mode of articulation in singing, singers learn to prolong a note to an almost indefinite extent. This practice will form an excellent exercise for the stammerer. Every public speaker might derive many valuable hints from the art of singing, and it is now allowed that any person may learn to sing, with sufficient time and pains. A musical ear is not so necessarily the gift of nature, as was formerly believed. If not possessed, it may be acquired. Therefore I recommend every stammerer to learn to sing. To return to inhalation: the patient must be very careful to avoid sudden and forcible attempts at inspiration and expiration. The air should be taken in without effort, and allowed to pass out in a slow and continued current. The practice of taking long breaths is beneficial, but these long breaths must be taken without effort, and without allowing any sound of respiration to be heard. The moment the lungs are expanded to such a degree as to produce inconvenience, inspiration must be stopped, and the moment expiration becomes painful, it should be carried no further. But by practice, the power of husbanding the breath, and prolonging the emission of sound, may be carried to a great extent. By the practice of filling the lungs, and carrying the expansion of the chest as far as it will go without effort and inconvenience, the expansibility and fulness of the chest may, in time, be much increased. It should always be done slowly, and without allowing the breath to be heard. The bad effect of inhaling with effort or carrying inhalation too far, is that a spasmodic action is induced, the air is expired in irregular and convulsive jets. By slow inhalation, the muscles do not become fatigued, but preserve their power to modify the emission of air. They are kept under the control of the will, and can be made to prevent the chest contracting too rapidly. A sentence should always be pronounced without interruption from taking breath. When the pupil first practices this, he can make short sentences, allowing himself places of rest where the sense will permit. But in a short time he will acquire the art of prolonging sound indefinitely: pronouncing the longest sentences without perceptible interruption from breathing. The air is taken into the lungs spontaneously, and the current of sound passes steadily on. The lungs are filled sufficiently between the imperceptible pauses in the emission of sound, for the purpose both of voice and of vital action.

In addition to these objects of attention; to wit, to place himself in an easy position, to keep his mouth well open, to obtain command of voice, the only remaining one is the management of the lips and tongue. On this I have already spoken sufficiently. He must acquire

this power by imitation where it is possible, and where it is not—where he cannot obtain assistance, he will find directions in books on elocution, for the articulation of the elementary sounds. His practice should be conducted before a glass.

The rapid results produced by the system called Mrs. Leigh's, I have said were real. They were made, and can be made as speedily as I have declared. But though the cures appear perfect for the time, until they are confirmed by long habit, there is great danger of a relapse. In a few cases, they will remain permanent, but in a majority, unless the course is persisted in, the difficulty returns. Moreover, if the affection is produced, as I have said, by mental causes, as long as those causes remain in the mind unchecked, they will be constantly acting to reproduce the disease. *Causa non sublata, non tollitur effectus.*

Liability to embarrassment, or to be carried away by strong emotion, will constantly operate to produce a recurrence of stammering. Now this disease is different from all others, for the moment the patient who has imagined himself cured, hears himself stammer, he loses confidence; the fear of stammering returns, and causes him to stammer in his next attempt at utterance. Perfect self command, is, therefore, all important.

Whatever method may be employed for the relief of this affection, no permanent advantage will be gained, in the majority of cases, unless resolutely persevered in for one or two years. With this perseverance, it may be cured with as much certainty as any other chronic disorder, and this not by any new or patent method, but simply by attention to the course I have described.

Boston, August, 1837.

ART. V. *Clinical Report on the Surgical Department of the Philadelphia Hospital, Blockley, for the months of May, June, and July, 1837.* By WILLIAM E. HORNER, M. D., Surgeon, Professor of Anatomy in the University of Pennsylvania, &c.

As this institution presents the most extensive and complete example of a clinical establishment in the United States, the following summary of its features may be interesting to such as have not seen it. It is a portion of the Alms-house for the city and adjoining districts of Philadelphia. Its name is rather conventional than estab-